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April 15, 2005

Mr. John DiMario
La Mirada Redevelopment Agency
13700 La Mirada Boulevard
La Mirada, California 90638

Sent via UPS

Subject: Revised Work Plan for Vapor Survey and Model Evaluation
Former ARCO Facility No. 5043
15005 Alondra Boulevard
La Mirada, California 90638

Dear Mr. DiMario:

On behalf of Atlantic Richfield Company (ARCO), Delta Environmental Consultants, Inc. (Delta) has prepared this revised work plan to the December 6, 2004 Work Plan for Vapor Survey and Risk Assessment (work plan) for former ARCO Facility No. 5043 (the site), located at 15005 Alondra Boulevard in the City of La Mirada, California (Figure 1). This revised work plan has been prepared in response to comments from the La Mirada Redevelopment Agency to Atlantic Richfield Company regarding the work plan, and to comments expressed in a letter dated February 8, 2005 prepared by GeoHydrologic Consultants, Inc. on behalf of the La Mirada Redevelopment Agency. This revised work plan presents the scope of work for the evaluation of potential vapor intrusion to indoor air at the site and the collection of data for possible modeling evaluation of the exposure pathway.

SITE HISTORY

On June 19, 1989, four soil borings (B-1 through B-4) were advanced to depths ranging from 10 to 40 feet below ground surface (bgs).

On August 30, 1989, one 6,000-gallon underground storage tank (UST), three 4,000-gallon USTs, and one 120-gallon waste-oil UST were removed from the site and were replaced with three double-walled Plasteel 12,000-gallon USTs and one 550-gallon double-walled Plasteel waste-oil UST.

Between October 1990 and December 1991, six soil borings (B-5 through B-7, B-9, B-10, and MW-1) and two soil vapor extraction wells (B-8/VW-1 and VW-2) were completed at the site.

Soil vapor extraction (SVE) remedial actions were initiated on August 15, 1994 and continued to May 1996.

In September 1996, the California Regional Water Quality Control Board, Los Angeles Region (LARWQCB) issued "No Further Action" status on the site. Historical reports and analytical results are not available to Delta.

In August and September 2002, three 12,000-gallon USTs, one 550-gallon waste oil UST, the fuel delivery system piping and product dispensers were removed from the site. Soil samples were collected for analyses beneath USTs, product dispensers and associated piping. Laboratory analysis of soil samples collected during these activities did not detect concentrations of total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes (BTEX collectively), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), or tertiary butanol (TBA). Concentrations of methyl tertiary butyl ether (MTBE) were detected in three of the samples (D-5, D-7, and T-6) at concentrations ranging from 0.01 to 0.023 milligrams per kilogram (mg/kg). Sample WO-1 contained a total recoverable petroleum hydrocarbon (TRPH) concentration of 3.8 mg/kg, which was the only detectable concentration in the sample. A report of the 2002 activities titled *Underground Storage Tank Removal Report,* dated October 28, 2002, was submitted to the County of Los Angeles Department of Public Works (LADPW) (Delta, 2002). The LADPW has not requested additional activities.

At the request of the La Mirada Redevelopment Agency, on June 14, 2004, Delta was on site to oversee the advancement of one soil boring to groundwater (B-15). Soil boring B-15 was advanced to a depth of 95 feet bgs and groundwater was encountered at 85 feet bgs. Upon reaching a depth of 95 feet bgs in boring B-15, a groundwater sample (B-15-GW) was collected using a Hydropunch™ sampler. The concentrations of ethylbenzene and xylenes detected in the groundwater sample collected from soil boring B-15 (2.5 and 32 micrograms per liter [ug/l], respectively) are below the California Maximum Contaminant Level (MCLs) of 300 and 1,700 ug/l, respectively (Delta, 2004).

At the request of the La Mirada Redevelopment Agency, on July 15, 2004, Delta was on site to oversee the advancement of three soil borings (B-14, B-16, and B-17). Soil borings B-14, B-16, and B-17 were each advanced to depths of 40 feet bgs (Delta, 2004).

The non-detect concentrations in soil samples collected from soil borings B-14 and B-17 and the minimal concentrations detected in soil samples collected from borings B-15 and B-16 indicate the previously operated soil vapor extraction system was successful in removing petroleum hydrocarbon concentrations from the subsurface and that the hydrocarbon concentrations detected beneath the USTs in August and September 2002 are not vertically extensive. Although the 30-foot soil sample from B-16 contained 8,300 mg/kg TPHg, the lack of significant BTEX concentrations in the same sample suggests the majority of the residual petroleum hydrocarbons in that sample consists of heavier, less mobile components of TPHg. Although 25-feet of continuous clean samples were not obtained in soil borings B-15 and B-16, the vertical extent of the residual petroleum hydrocarbon concentrations does not appear to extend deeper than 85 feet bgs in soil boring B-15 (Delta, 2004).

Historical soil sample analytical results from the soil samples collected beneath the former dispensers and USTs in 2002 and the in the soil borings advanced in 2004 are presented in Table 1. Soil sample and boring locations are presented on Figure 2.

GEOLOGY

The site is located within the Downey Plain, which is located within the larger Coastal Plain of Los Angeles County (CDWR, 1961). The site elevation is approximately 105 feet above mean sea level. Site topography is relatively flat; however, ground elevation decreases to the southwest at an approximate gradient of 0.015 feet per foot (USGS, 1965). The site is located on Upper Pleistocene Lakewood Formation deposits consisting of marine and continental gravel, sand, sandy silt, silt, and clay with shale pebbles (CDWR, 1961).

Soils encountered during the recent site assessment activities consisted generally of gravelly sand, sandy gravel,

sand, and silty sand. A layer of clayey silt was encountered in soil borings B-15, B-16, and B-17 at approximately 35 to 40 feet bgs. A clayey silt and silty clay were also encountered in soil boring B-15 between 60 and 85 feet bgs.

HYDROGEOLOGY

The site overlies the Central Basin Pressure Area, which lies within the larger Los Angeles Coastal Groundwater Basin (CDWR, 1961). Coyote Creek is approximately one mile southeast of the site. The San Gabriel River is approximately five miles west of the site. Located within the Lakewood Formation are the Artesia, Exposition, Gage, and Gardena Aquifers (CDWR, 1961). Recharge for this area is primarily from the San Gabriel River watershed (CDWR, 1961). Groundwater was encountered during the previous investigation in June 2004 at approximately 85 feet bgs.

PROPOSED SCOPE OF WORK

In order to perform a screening for the evaluation of potential vapor intrusion to indoor air at the site, and to collect data for possible modeling evaluation of this exposure pathway, Delta proposes the following scope of work. The scope of work will be conducted in accordance with the Advisory-Active Soil Gas Investigations (Cal-EPA, 2003) dated January 28, 2003 prepared by the LARWQCB and the California Department of Toxic Substances Control (DTSC), and the Interim Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Cal-EPA, 2004), prepared by the DTSC dated December 15, 2004. It should be noted that the site is currently a vacant unpaved lot.

Task 1: Project Initiation

- Update the site-specific Health and Safety Plan. A copy of the Health and Safety Plan will be on-site during all Delta-monitored field events.

- Mark the proposed boring locations shown on Figure 2 and notify Underground Service Alert, Atlantic Richfield Company, and the La Mirada Redevelopment Agency of the scheduled field activities.

- A private utility locating company will be contracted to locate underground utilities on site prior to the initiation of drilling.

Task 2: Field Activities

- Advance 13 direct-push Geoprobe™ vapor probe sample locations as shown on Figure 2. The orientation of the proposed vapor probe sample locations were selected to assess soil vapor for model evaluation purposes. Sample locations are based on an approximately 10 to 20 foot spacing in potential source areas and less than 100-foot spacing over the remainder of the site.

- The borings will not be pre-cleared using a hand auger to prevent volatile loss from the sample location. At each sample location, the probe will be advanced to a minimum of one sample depth (five feet bgs). In areas of former potential sources or known petroleum hydrocarbon concentrations, the boring will be advanced to a minimum of two sample depths (five and 10 feet bgs). The 5- and 10-foot samples will be collected from separate boreholes (approximately one foot apart). Additional samples may be necessary based on site conditions.

- Sampling will start with a 15-foot sample in the locations advanced in the former tank field since backfill is present from ground surface to 14 feet bgs.

- During vapor probe advancement, Delta will collect vapor samples for chemical analysis from five and 10 feet bgs at each location. In order to collect a vapor sample, the soil gas probe drive rod will be driven to the specified sample depth in a closed position. During installation of the probe, hydrated bentonite will be used to seal around the drive rod at the ground surface to prevent ambient air intrusion from occurring. At the sample depth, ¼-inch non-reactive tubing will be attached to a coupling mechanism and lowered down the center of the push rod. When the tubing is coupled with the sampler, the sampler will be retracted to expose a stainless steel filter screen and the sample will be pulled to the surface via a vacuum pump.

- Following probe installation at each location, at least 20 minutes will be allowed to elapse before initiating the purge volume test, leak test, or soil gas sampling in order to allow for subsurface conditions to equilibrate.

- Prior to collecting vapor samples, a step purge volume test will be conducted at the first probe location, which is proposed to be located near soil boring B-15. The purge volume test will be conducted by collecting and analyzing vapor samples after purging one, three, and seven purge volumes. The appropriate purge volume will be selected based on the highest concentrations of TPHg or volatile organic constituents (VOCs) detected during the step purge tests. If concentrations of TPHg or VOCs are not detected in any of the step purge tests, a default of three purge volumes will be extracted prior to sampling.

- Purging and sampling will be completed using a vacuum pump at rates between 100 to 200 milliliters per minute (ml/min). After the soil gas probe is adequately purged, vapor samples will be collected in glass bulbs. The vapor samples will be collected on the intake side of the vacuum pump. Method blanks will be collected as necessary. The vapor samples will be submitted to an on-site mobile laboratory.

- Leak tests will be performed using pentane as a tracer compound for each sample point. Pentane will be applied with a cloth around the outside of all fittings and analyzed for by the on-site mobile laboratory.

- One duplicate vapor sample per day will be collected in a Summa canister for analysis by a stationary laboratory. Chain-of-custody procedures will be followed from the time the samples are collected until the time they are relinquished to the laboratory.

- If concentrations of BTEX, VOCs, or oxygenates are detected in the samples analyzed by the mobile laboratory, then additional vapor samples will be collected as potential inputs for a soil vapor migration model to quantify attenuation. These additional vapor samples will be submitted to a stationary California Department of Health Services-certified laboratory for possible analysis. However, as stated in Step 5 of the Interim Final Guidance Document (Cal-EPA, 2004), if the preliminary results using default attenuation factors result in an acceptable cumulative human health risk, no further analysis will be needed.

- During advancement, Delta will collect undisturbed soil samples for physical analysis. Three soil samples will be collected from locations determined on site (at depths corresponding to detected VOCs) for analysis of: soil bulk density, grain density, total porosity, soil moisture content, fraction organic carbon, and grain size. Soil remaining in the acetate sampling liner will be used for classification according to the Unified Soil Classification System. Soil classifications and other soil sampling data will be presented on individual boring logs. These soil samples will be submitted to a stationary California Department of Health Services-certified laboratory for possible analysis. However, as stated in Step 5 of

the Interim Final Guidance Document (Cal-EPA, 2004), if the preliminary results using default attenuation factors result in an acceptable cumulative human health risk, no further analysis will be needed.

- Between each sample point, drive rods and other reusable components will be cleaned with a non-phosphate detergent, and double rinsed, or will be steam cleaned. Disposable tubing will be used for each vapor sample point.

- Following completion, each sample point will be backfilled with bentonite grout and resurfaced with native soil to match the existing ground surface.

- Any soil cuttings and wash water generated during boring activities will be placed in Department of Transportation-approved, 55-gallon, metal drums and stored on-site pending off-site disposal.

- Sampling will not be conducted during or immediately after a significant rain event.

Task 3: Laboratory Analysis

- Vapor samples collected will be analyzed on site by a California Department of Health Services-certified mobile laboratory for VFH according to EPA Method 8015 Modified and for BTEX, volatile organic compounds (VOCs), and oxygenates according to EPA Method 8260B. Analytical minimum detection limits will be based on limits specified in the LARWQCB and DTSC documents referenced above.

- The duplicate vapor sample collected will be submitted to a stationary California Department of Health Services-certified laboratory for analysis. The duplicate vapor sample will be analyzed for VFH according to EPA Method 8015 Modified and for BTEX, VOCs, and oxygenates according to EPA Method T0-14A. Chain-of-custody procedures will be followed from the time the samples are collected until the time they are relinquished to the laboratory.

- Each soil gas sample will also be analyzed for the tracer compound used during sample collection.

- If concentrations of BTEX, VOCs, or oxygenates are detected in the samples analyzed by the mobile laboratory and additional vapor samples are collected as potential inputs for a soil vapor migration model to quantify attenuation, these additional vapor samples will be submitted to a stationary California Department of Health Services-certified laboratory and analyzed for oxygen, carbon dioxide, and methane.

- The soil samples collected will be submitted to a California Department of Health Services-certified laboratory for possible analysis for soil bulk density, grain density, total porosity, soil moisture content, fraction organic carbon, and grain size.

Task 4: Model Evaluation

- If preliminary screening evaluation identifies a potential risk, a model will be performed. The model evaluation will be performed using a version of the Johnson and Ettinger Model (J&E Model).

Task 5: Report Preparation

- Prepare a summary report of field activities and analytical results for submittal to the La Mirada Redevelopment Agency.

REFERENCES

California Department of Water Resources (CDWR), June 1961, Planned Utilization of the Ground Water Basins of the Coastal Plain of the Los Angeles County, Appendix A – Ground Water Geology, Bulletin No. 104.

Delta Environmental Consultants, Inc., (2002), Underground Storage Tank Removal Report, dated October 28, 2002.

Delta Environmental Consultants, Inc., (2004), Site Assessment Report, dated August 19, 2004.

California Environmental Protection Agency (Cal-EPA), 2003, Advisory-Active Soil Gas Investigation, jointly issued by the LARWQCB and the California Department of Toxic Substances Control (DTSC), dated January 28, 2003.

California Environmental Protection Agency (Cal-EPA), 2004, Interim Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air, issued by the DTSC, dated December 15, 2004.

United States Geological Survey (USGS), 1965, Whittier Quadrangle, California, 7.5 Minute Quadrangle (Topographic), 1:24,000 scale, photo revised 1981.

SCHEDULE

Upon review of this work plan revision by the La Mirada Redevelopment Agency, Delta will schedule the field activities. Delta expects to receive the final laboratory report of the duplicate air sample and the soil sample analysis approximately two weeks after sample submittal and will then complete a model evaluation, if necessary, and prepare and submit the final report.

REMARKS AND SIGNATURES

The recommendations contained in this work plan represent Delta's professional opinions based upon the currently available information and are determined in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Delta's Client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

If you have any questions concerning this report, please contact the undersigned at (949) 360-5789.

Sincerely,
DELTA ENVIRONMENTAL CONSULTANTS, INC.

Amy Mora
Project Manager

4/15/05
Date

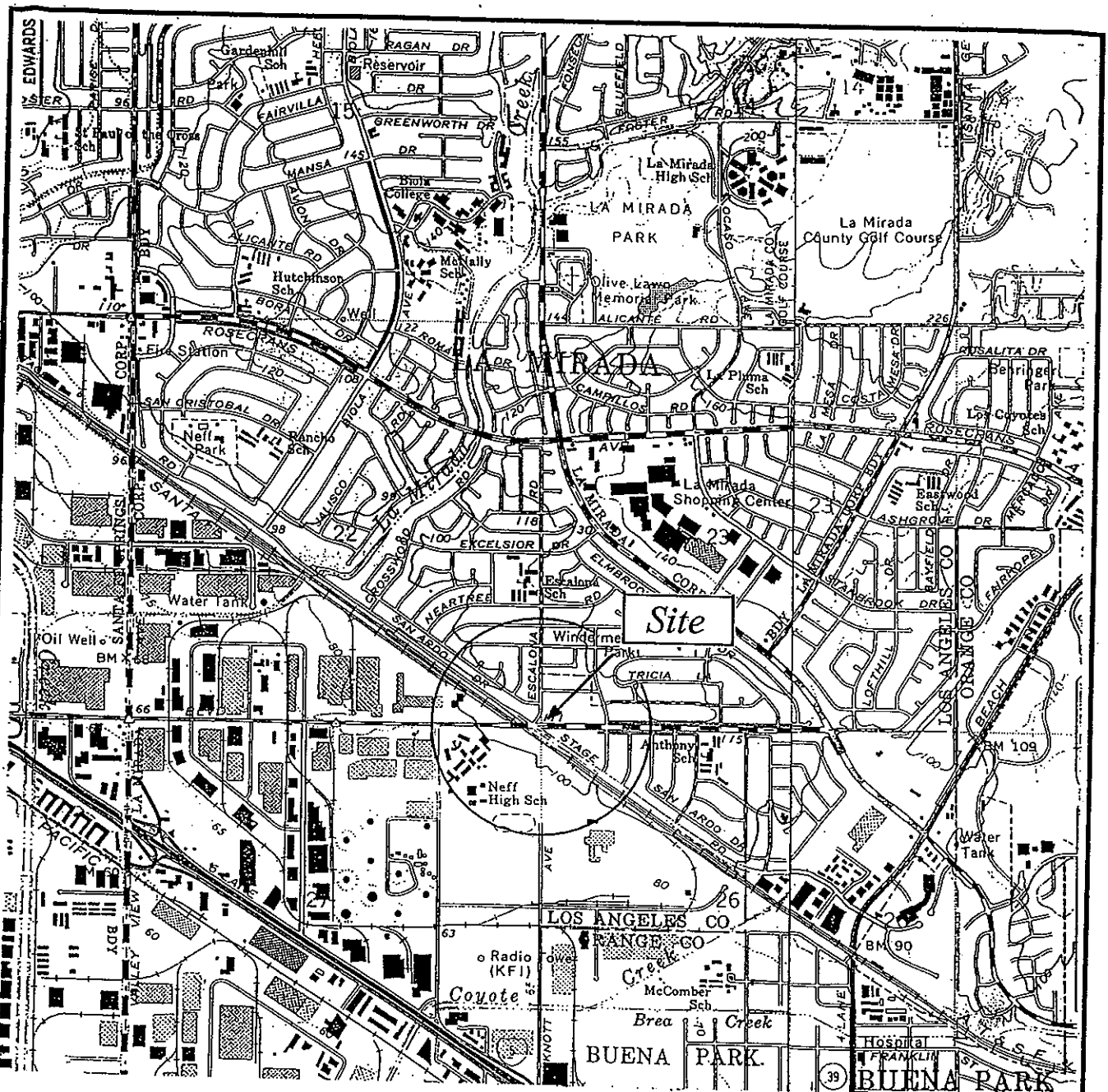
Ann M. Hillyard, P.G., REA
California Professional Geologist No. 6233

4/15/05
Date

Attachments:
Figure 1 Site Location Map
Figure 2 Site Map
Table 1 Historical Soil Analytical Results

cc: Mr. Gordon Terhune, Atlantic Richfield Company, La Palma, California
Mr. Todd Normane, Atlantic Richfield Company, La Palma, California
Mr. Richard Vogel, GeoHydrologic Consultants, Inc., Costa Mesa, California

(q:\bpwest\socal\5043\rwpvs.doc)



GENERAL NOTES:

BASE MAPS FROM U.S.G.S.

WHITTIER QUADRANGLE 1965

LA HABRA QUADRANGLE 1964

LA MIRADA, CA

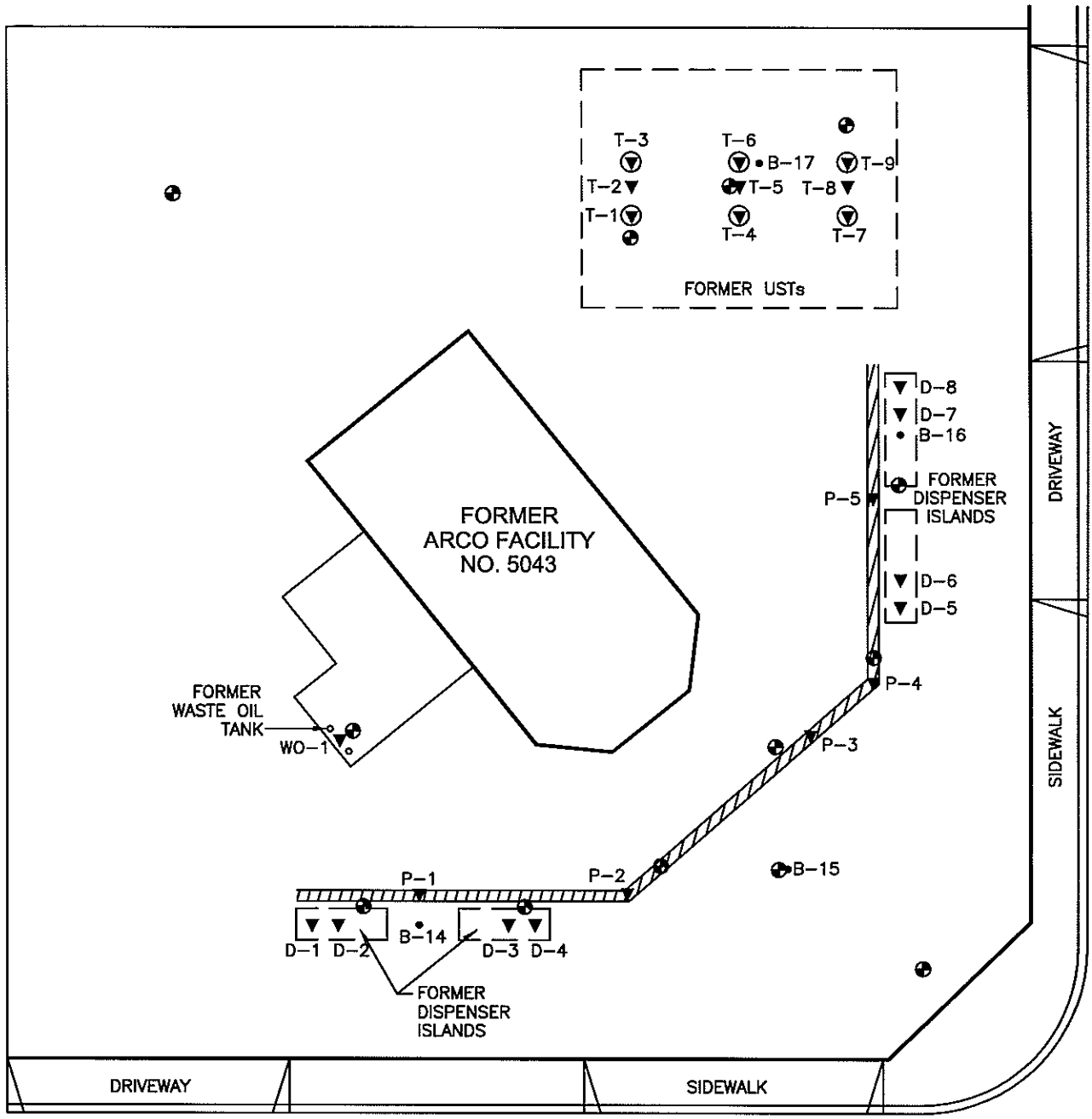
7.5 MINUTE TOPOGRAPHIC MAP
PHOTOREVISED 1981

0 2000
SCALE

FIGURE 1
SITE LOCATION MAP
ARCO FACILITY NO. 5043
15005 ALONDRA BOULEVARD
LA MIRADA, CA 90638

PROJECT NO.		DRAWN BY
		C. OTA
FILE NO.		PREPARED BY
SLM 1		C. OTA
DATE	REV.	REVIEWED BY
9/11/02		

Delta Environmental Consultants, Inc.



LEGEND

- APPROXIMATE PROPOSED VAPOR PROBE SAMPLE LOCATION
- B-17 • SOIL BORING LOCATION
- D-8 ▼ DISPENSER SOIL SAMPLE LOCATION
- P-5 ▼ PIPING SOIL SAMPLE LOCATION
- T-9 ▼ TANK SOIL SAMPLE LOCATION
- WO-1 ▼ WASTE OIL TANK SOIL SAMPLE LOCATION
- TRENCH LOCATION

0 20'
SCALE

FIGURE 2

SITE MAP
FORMER ARCO FACILITY NO. 5043
15005 ALONDRA BOULEVARD
LA MIRADA, CA.

PROJECT NO.	DRAWN BY
G09XZ	K. MARTIN
FILE NO.	PREPARED BY
0-745-09	A. MORA
DATE: 15 MAR 05 / REV.: 0	REVIEWED BY

Delta Environmental Consultants, Inc.

TABLE 1
HISTORICAL SOIL ANALYTICAL RESULTS
ARCO Facility No. 5043
15005 Alondra Blvd.
La Mirada, CA

Sample I.D.	Date Sampled	Sample Depth	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	MTBE* (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	Ethanol (mg/kg)
D-1	9/6/2002	2	ND<0.22	ND<0.0018	ND<0.0018	ND<0.0018	ND<0.0018	ND<0.0045	ND<0.0045	ND<0.0045	ND<0.0045	ND<0.018	NA
D-2	9/6/2002	2	ND<0.20	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.017	NA
D-3	9/6/2002	3	ND<0.20	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0041	ND<0.0041	ND<0.0041	ND<0.0041	ND<0.017	NA
D-4	9/6/2002	3	ND<0.21	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.017	NA
D-5	9/6/2002	3	ND<0.19	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0016	0.01	ND<0.0041	ND<0.0041	ND<0.0041	ND<0.016	NA
D-6	9/6/2002	3	ND<0.19	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0039	ND<0.0039	ND<0.0039	ND<0.0039	ND<0.016	NA
D-7	9/6/2002	3	ND<0.20	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0016	0.011	ND<0.0040	ND<0.0040	ND<0.0040	ND<0.016	NA
D-8	9/6/2002	3	ND<0.20	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0040	ND<0.0040	ND<0.0040	ND<0.0040	ND<0.016	NA
P-1	9/6/2002	3	ND<0.22	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0041	ND<0.0041	ND<0.0041	ND<0.0041	ND<0.016	NA
P-2	9/6/2002	4	ND<0.21	ND<0.0018	ND<0.0018	ND<0.0018	ND<0.0018	ND<0.0044	ND<0.0044	ND<0.0044	ND<0.0044	ND<0.018	NA
P-3	9/6/2002	4	ND<0.22	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0040	ND<0.0040	ND<0.0040	ND<0.0040	ND<0.016	NA
P-4	9/6/2002	4	ND<0.20	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.017	NA
P-5	9/6/2002	3	ND<0.21	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.017	NA
T-1	9/10/2002	14	ND<0.21	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0043	ND<0.0043	ND<0.0043	ND<0.0043	ND<0.017	NA
T-2	9/10/2002	14	ND<0.20	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	NA
T-3	9/10/2002	14	ND<0.25	ND<0.0023	ND<0.0023	ND<0.0023	ND<0.0023	ND<0.0057	ND<0.0057	ND<0.0057	ND<0.0057	ND<0.023	NA
T-4	9/10/2002	14	ND<0.22	ND<0.0018	ND<0.0018	ND<0.0018	ND<0.0018	ND<0.0044	ND<0.0044	ND<0.0044	ND<0.0044	ND<0.018	NA
T-5	9/10/2002	14	ND<0.22	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	NA
T-6	9/10/2002	14	ND<0.22	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0020	0.023	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	NA
T-7	9/10/2002	14	ND<0.21	ND<0.0018	ND<0.0018	ND<0.0018	ND<0.0018	ND<0.0044	ND<0.0044	ND<0.0044	ND<0.0044	ND<0.018	NA
T-8	9/10/2002	14	ND<0.20	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0043	ND<0.0043	ND<0.0043	ND<0.0043	ND<0.017	NA
T-9	9/10/2002	14	ND<0.21	ND<0.0018	ND<0.0018	ND<0.0018	ND<0.0018	ND<0.0044	ND<0.0044	ND<0.0044	ND<0.0044	ND<0.018	NA
WO-1	9/10/2002	8	ND<0.23	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.017	NA
B-15-5	6/14/2004	5	ND<0.25	ND<0.0018	ND<0.0018	ND<0.0018	ND<0.0018	ND<0.0045	ND<0.0045	ND<0.0045	ND<0.0045	ND<0.018	ND<0.090
B-15-10	6/14/2004	10	0.52	0.76J	7.2	30	130	ND<1.9	ND<1.9	ND<1.9	ND<1.9	ND<7.6	ND<380
B-15-15	6/14/2004	15	620	0.0018J	0.023	2.2	19	ND<0.0043	ND<0.0043	ND<0.0043	ND<0.0043	0.018J	ND<0.086
B-15-20	6/14/2004	20	ND<0.20	ND<0.0015	ND<0.0015	ND<0.0015	ND<0.0015	ND<0.0038	ND<0.0038	ND<0.0038	ND<0.0038	ND<0.015	ND<0.077
B-15-25	6/14/2004	25	ND<0.25	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.10
B-15-30	6/14/2004	30	ND<0.25	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.10
B-15-35	6/14/2004	35	ND<0.21	ND<0.0017	ND<0.0017	ND<0.0017	0.0076	ND<0.0043	ND<0.0043	ND<0.0043	ND<0.0043	ND<0.017	ND<0.085
B-15-40	6/14/2004	40	290	ND<0.10	ND<0.10	ND<0.10	0.33	ND<0.25	ND<0.25	ND<0.25	ND<0.25	ND<1.0	ND<50
B-15-45	6/14/2004	45	0.38J	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0050	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.017	ND<0.084
B-15-50	6/14/2004	50	ND<0.25	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.10
B-15-55	6/14/2004	55	ND<0.25	ND<0.0023	ND<0.0023	ND<0.0023	ND<0.0023	ND<0.0056	ND<0.0056	ND<0.0056	ND<0.0056	ND<0.023	ND<0.11

TABLE 1
HISTORICAL SOIL ANALYTICAL RESULTS
ARCO Facility No. 5043
15005 Alondra Blvd.
La Mirada, CA

Sample I.D.	Date Sampled	Sample Depth	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	MTBE* (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	Ethanol (mg/kg)
B-15-60	6/14/2004	60	0.34J	0.047	0.020	0.013	0.054	0.0075J	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.017	ND<0.084
B-15-65	6/14/2004	65	ND<0.19	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.017	ND<0.084
B-15-70	6/14/2004	70	0.41	0.0038J	ND<0.0018	ND<0.0018	ND<0.0018	ND<0.0044	ND<0.0044	ND<0.0044	ND<0.0044	ND<0.018	ND<0.088
B-15-75	6/14/2004	75	ND<0.22	ND<0.0017	ND<0.0017	ND<0.0017	0.0027J	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.017	ND<0.083
B-15-80	6/14/2004	80	ND<0.22	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0040	ND<0.0040	ND<0.0040	ND<0.0040	ND<0.016	ND<0.079
B-15-85	6/14/2004	85	ND<0.25	ND<0.0017	ND<0.0017	ND<0.0017	0.0023J	ND<0.0043	ND<0.0043	ND<0.0043	ND<0.0043	ND<0.017	ND<0.086
B-15-90	6/14/2004	90	ND<0.20	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0043	ND<0.0043	ND<0.0043	ND<0.0043	ND<0.017	ND<0.086
B-15-95	6/14/2004	95	ND<0.20	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.017	ND<0.084
B-14-5	7/15/2004	5	ND<0.21	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0040	ND<0.0040	ND<0.0040	ND<0.0040	ND<0.016	ND<0.079
B-14-10	7/15/2004	10	ND<0.25	ND<0.0024	ND<0.0024	ND<0.0024	ND<0.0024	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.0059	ND<0.024	ND<0.12
B-14-15	7/15/2004	15	ND<0.21	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0043	ND<0.0043	ND<0.0043	ND<0.0043	ND<0.017	ND<0.085
B-14-20	7/15/2004	20	ND<0.20	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.017	ND<0.083
B-14-25	7/15/2004	25	ND<0.21	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.017	ND<0.084
B-14-30	7/15/2004	30	ND<0.20	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0040	ND<0.0040	ND<0.0040	ND<0.0040	ND<0.016	ND<0.080
B-14-35	7/15/2004	35	ND<0.21	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0041	ND<0.0041	ND<0.0041	ND<0.0041	ND<0.016	ND<0.082
B-14-40	7/15/2004	40	ND<0.25	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.10
B-16-5	7/15/2004	5	ND<0.19	ND<0.0018	ND<0.0018	ND<0.0018	ND<0.0018	ND<0.0044	ND<0.0044	ND<0.0044	ND<0.0044	ND<0.018	ND<0.088
B-16-10	7/15/2004	10	ND<0.25	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.10
B-16-15	7/15/2004	15	ND<0.20	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0041	ND<0.0041	ND<0.0041	ND<0.0041	ND<0.017	ND<0.083
B-16-20	7/15/2004	20	ND<0.20	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0017	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.0042	ND<0.017	ND<0.084
B-16-25	7/15/2004	25	ND<0.25	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.10
B-16-30	7/15/2004	30	8300	ND<3.3	4.4J	5.3J	120	ND<8.3	ND<8.3	ND<8.3	ND<8.3	ND<33	ND<1700
B-16-35	7/15/2004	35	ND<0.21	ND<0.0017	ND<0.0017	0.013	0.015	ND<0.0043	ND<0.0043	ND<0.0043	ND<0.0043	ND<0.017	ND<0.085
B-16-40	7/15/2004	40	ND<0.21	ND<0.0015	ND<0.0015	0.015	0.039	ND<0.0039	ND<0.0039	ND<0.0039	ND<0.0039	ND<0.015	ND<0.077
B-17-5	7/15/2004	5	ND<0.25	ND<0.0015	ND<0.0015	ND<0.0015	ND<0.0015	ND<0.0037	ND<0.0037	ND<0.0037	ND<0.0037	ND<0.015	ND<0.075
B-17-10	7/15/2004	10	ND<0.21	ND<0.0015	ND<0.0015	ND<0.0015	ND<0.0015	ND<0.0037	ND<0.0037	ND<0.0037	ND<0.0037	ND<0.015	ND<0.074
B-17-15	7/15/2004	15	ND<0.28	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.10
B-17-20	7/15/2004	20	ND<0.20	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.10
B-17-25	7/15/2004	25	ND<0.25	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.10
B-17-30	7/15/2004	30	ND<0.25	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.10
B-17-35	7/15/2004	35	ND<0.21	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0016	ND<0.0040	ND<0.0040	ND<0.0040	ND<0.0040	ND<0.016	ND<0.080
B-17-40	7/15/2004	40	ND<0.19	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0020	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.020	ND<0.10

TABLE 1
HISTORICAL SOIL ANALYTICAL RESULTS
ARCO Facility No. 5043
15005 Alondra Blvd.
La Mirada, CA

Sample I.D.	Date Sampled	Sample Depth	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	MTBE* (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	Ethanol (mg/kg)

Notes: EPA = Environmental Protection Agency

TRPH = Total Recoverable Petroleum Hydrocarbons

TPHg = Total Petroleum Hydrocarbons as gasoline

mg/kg = Milligrams per kilogram

MTBE = Methyl tertiary butyl ether

DIPE = Di-isopropyl ether

ETBE = Ethyl tertiary butyl ether

TAME = Tertiary amyl methyl ether

TBA = Tertiary butanol

NA = Not analyzed

ND<Number = Analyte not detected at or above the method detection limit

J = analyte detected at a level less than the reporting limit and greater than or equal to the method detection limit.

TPHg analysis by EPA 8015 Modified

Benzene, Toluene, Ethylbenzene, Xylenes, MTBE, DIPE, ETBE, TAME, TBA, and Ethanol analyses by EPA 8260